

Nader Jalili

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

127
papers

2,795
citations

28
h-index

49
g-index

143
ext. papers

3,185
ext. citations

3
avg, IF

5.45
L-index

#	Paper	IF	Citations
127	. <i>IEEE Access</i> , 2020 , 8, 23965-24005	3.5	13
126	Modeling and Control of a Planetary Compound System Under External Magnetic Load. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2020 , 142,	1.6	1
125	Vibration analysis and control of fluid containers using piezoelectrically-excited side wall. <i>JVC/Journal of Vibration and Control</i> , 2019 , 25, 1393-1408	2	3
124	Theoretical and Experimental Analysis of Coupled Flexural-Torsional Vibrations of Rotating Beams 2018 ,		3
123	Modeling and Dynamics Analysis of a Beam-Hoverboard Self-Transportation System 2018 ,		1
122	Development of a novel precision instrument for high-resolution simultaneous normal and shear force measurements between small planar samples. <i>Review of Scientific Instruments</i> , 2017 , 88, 055002	1.7	1
121	Model development and boundary interaction force control of a piezoresistive-based microcantilever. <i>Robotica</i> , 2016 , 34, 328-346	2.1	1
120	Ultrasensitive Piezoelectric-Based Microcantilever Biosensor: Theory and Experiment. <i>IEEE/ASME Transactions on Mechatronics</i> , 2015 , 20, 308-312	5.5	12
119	A cost-effective self-sensing biosensor for detection of biological species at ultralow concentrations. <i>Journal of Applied Physics</i> , 2013 , 113, 224905	2.5	9
118	A response to the commentary on the paper "A comprehensive modeling and vibration analysis of AFM microcantilevers subjected to nonlinear tip-sample interaction forces" by Sohrab Eslami and Nader Jalili". <i>Ultramicroscopy</i> , 2013 , 131, 94-5	3.1	
117	Comprehensive distributed-parameters modeling and experimental validation of microcantilever-based biosensors with an application to ultrasmall biological species detection. <i>Journal of Micromechanics and Microengineering</i> , 2013 , 23, 025007	2	6
116	Nanomechanical Cantilever-Based Manipulation for Sensing and Imaging 2013 , 29-40		1
115	A self-sensing piezoelectric microcantilever biosensor for detection of ultrasmall adsorbed masses: theory and experiments. <i>Sensors</i> , 2013 , 13, 6089-108	3.8	23
114	A comprehensive modeling and vibration analysis of AFM microcantilevers subjected to nonlinear tip-sample interaction forces. <i>Ultramicroscopy</i> , 2012 , 117, 31-45	3.1	28
113	Integrated automated nanomanipulation and real-time cellular surface imaging for mechanical properties characterization. <i>Review of Scientific Instruments</i> , 2012 , 83, 105002	1.7	7
112	Automated boundary interaction force control of micromanipulators within situ applications to microsurgery. <i>Journal of Micromechanics and Microengineering</i> , 2012 , 22, 125013	2	3
111	Exact Frequency Analysis of a Rotating Cantilever Beam With Tip Mass Subjected to Torsional-Bending Vibrations. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2011 , 133,	1.6	17

110	Molecular dynamics simulation of manipulation of metallic nanoclusters on stepped surfaces. <i>Open Physics</i> , 2011 , 9,	1.3	6
109	Supervisory hybrid control of piezoelectric actuators utilized in tracking piecewise continuous trajectories. <i>Precision Engineering</i> , 2011 , 35, 566-573	2.9	1
108	Vibration Analysis of Thin Plates Subject to Piezoelectric Actuation: A New Perspective in Modeling and Numerical Analysis 2011 ,		1
107	Adhesin-Specific Nanomechanical Cantilever Biosensors for Detection of Microorganisms. <i>Journal of Heat Transfer</i> , 2011 , 133,	1.8	10
106	Adaptive trajectory control of microcantilever's tip utilised in atomic force microscopy-based manipulation. <i>International Journal of Control</i> , 2011 , 84, 1945-1955	1.5	10
105	Nanomaterial-Based Piezoelectric Actuators and Sensors 2010 , 419-461		2
104	Development, analysis and control of a high-speed laser-free atomic force microscope. <i>Review of Scientific Instruments</i> , 2010 , 81, 023707	1.7	7
103	Piezoelectric-Based Vibration Control 2010 ,		71
102	An Adaptive Amplitude-Based Self-Sensing Piezoelectrically-Driven Microcantilever Sensor 2010 ,		2
101	Vibration Control Using Piezoelectric Actuators and Sensors 2010 , 233-309		
100	Piezoelectric-Based Systems Modeling 2010 , 183-232		1
99	Subharmonics analysis of nonlinear flexural vibrations of piezoelectrically actuated microcantilevers. <i>Nonlinear Dynamics</i> , 2010 , 59, 397-409	5	31
98	Linear and non-linear vibration and frequency response analyses of microcantilevers subjected to tip-sample interaction. <i>International Journal of Non-Linear Mechanics</i> , 2010 , 45, 176-185	2.8	14
97	Piezoelectric-Based Nanomechanical Cantilever Sensors 2010 , 359-417		
96	Hysteretic Characteristics of Piezoelectric Materials 2010 , 161-181		
95	A Unified Approach to Vibrations of Distributed-Parameters Systems 2010 , 55-112		
94	Piezoelectric-Based Micro- and Nano-Positioning Systems 2010 , 313-358		
93	An Overview of Active Materials Utilized in Smart Structures 2010 , 115-128		1

92	Physical Principles and Constitutive Models of Piezoelectric Materials 2010 , 129-159		2
91	Towards Microcantilever-based Force Sensing and Manipulation: Modeling, Control Development and Implementation. <i>International Journal of Robotics Research</i> , 2009 , 28, 464-483	5.7	20
90	TWO-DIMENSIONAL ATOMISTIC SIMULATION OF METALLIC NANOPARTICLES PUSHING. <i>Modern Physics Letters B</i> , 2009 , 23, 2695-2702	1.6	12
89	Modeling Piezoresponse Force Microscopy for Low-Dimensional Material Characterization: Theory and Experiment. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2009 , 131,	1.6	6
88	Mass detection of elastically distributed ultrathin layers using piezoresponse force microscopy. <i>Journal of Micromechanics and Microengineering</i> , 2009 , 19, 025016	2	8
87	Recursive Memory-based Hysteresis Modeling for Solid-state Smart Actuators. <i>Journal of Intelligent Material Systems and Structures</i> , 2009 , 20, 2161-2171	2.3	8
86	A time-dependent multiphysics, multiphase modeling framework for carbon nanotube synthesis using chemical vapor deposition. <i>AIChE Journal</i> , 2009 , 55, 3152-3167	3.6	4
85	Response Characteristics of Thermoresponsive Polymers Using Nanomechanical Cantilever Sensors. <i>Macromolecular Chemistry and Physics</i> , 2009 , 210, 1339-1345	2.6	26
84	Vibration analysis of vector piezoresponse force microscopy with coupled flexural-longitudinal and lateral-torsional motions. <i>Journal of Sound and Vibration</i> , 2009 , 322, 1081-1099	3.9	10
83	Piezoelectrically actuated microcantilevers: An experimental nonlinear vibration analysis. <i>Sensors and Actuators A: Physical</i> , 2009 , 150, 131-136	3.9	28
82	On the nonlinear-flexural response of piezoelectrically driven microcantilever sensors. <i>Sensors and Actuators A: Physical</i> , 2009 , 153, 171-179	3.9	38
81	Underlying mechanics of active nanocomposites with tunable properties. <i>Composites Science and Technology</i> , 2009 , 69, 545-552	8.6	9
80	Nonlinear vibrations of microcantilevers subjected to tip-sample interactions: Theory and experiment. <i>Journal of Applied Physics</i> , 2009 , 106, 113510	2.5	20
79	Nanomechanical cantilever active probes for ultrasmall mass detection. <i>Journal of Applied Physics</i> , 2009 , 105, 013506	2.5	14
78	Robust Adaptive Control of Coupled Parallel Piezo-Flexural Nanopositioning Stages. <i>IEEE/ASME Transactions on Mechatronics</i> , 2009 , 14, 11-20	5.5	114
77	Guest Editorial Introduction to the Focused Section on Mechatronics for MEMS and NEMS. <i>IEEE/ASME Transactions on Mechatronics</i> , 2009 , 14, 397-404	5.5	5
76	Subharmonic Resonances of Piezoelectrically Actuated Microcantilevers 2009 ,		1
75	Microcantilever-Based Force Tracking With Applications to High-Resolution Imaging and Nanomanipulation. <i>IEEE Transactions on Industrial Electronics</i> , 2008 , 55, 3935-3943	8.9	12

74	Modeling, Nonlinear Dynamics, and Identification of a Piezoelectrically Actuated Microcantilever Sensor. <i>IEEE/ASME Transactions on Mechatronics</i> , 2008 , 13, 58-65	5.5	74
73	2008 ,		5
72	Modeling and experimental vibration analysis of nanomechanical cantilever active probes. <i>Journal of Micromechanics and Microengineering</i> , 2008 , 18, 085008	2	39
71	Forced vibration analysis of flexible Euler-Bernoulli beams with geometrical discontinuities 2008 ,		11
70	A Polynomial-Based Linear Mapping Strategy for Feedforward Compensation of Hysteresis in Piezoelectric Actuators. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2008 , 130,	1.6	50
69	Coupled Flexural-Torsional Nonlinear Vibrations of Piezoelectrically Actuated Microcantilevers With Application to Friction Force Microscopy. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2008 , 130,	1.6	25
68	Modeling Major and Minor Hysteresis Loops in Galvanol-Driven Micro-Positioning Actuators Using a Memory-Based Hysteresis Framework 2008 ,		1
67	Buckling of boron nitride nanotube reinforced piezoelectric polymeric composites subject to combined electro-thermo-mechanical loadings. <i>Composites Science and Technology</i> , 2008 , 68, 1489-1501	8.6	72
66	An experimental investigation of nonlinear vibration and frequency response analysis of cantilever viscoelastic beams. <i>Journal of Sound and Vibration</i> , 2008 , 311, 1409-1419	3.9	54
65	A novel piezoelectrically actuated flexural/torsional vibrating beam gyroscope. <i>Journal of Sound and Vibration</i> , 2008 , 311, 1305-1324	3.9	60
64	Towards fused vision and force robust feedback control of nanorobotic-based manipulation and grasping. <i>Mechatronics</i> , 2008 , 18, 566-577	3	11
63	Nano-robotic manipulation using a RRP nanomanipulator: Part B [Robust control of manipulator] tip using fused visual servoing and force sensor feedbacks. <i>Applied Mathematics and Computation</i> , 2008 , 206, 628-642	2.7	9
62	Nano-robotic manipulation using a RRP nanomanipulator: Part A [Mathematical modeling and development of a robust adaptive driving mechanism. <i>Applied Mathematics and Computation</i> , 2008 , 206, 618-627	2.7	13
61	Nonlinear vibrations of piezoelectric microcantilevers for biologically-induced surface stress sensing. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2008 , 13, 1964-1977	3.7	33
60	A comprehensive model for load transfer in nanotube reinforced piezoelectric polymeric composites subjected to electro-thermo-mechanical loadings. <i>Composites Part B: Engineering</i> , 2008 , 39, 986-998	10	25
59	Modeling of piezo-flexural nanopositioning systems subjected to rate-varying inputs 2007 ,		3
58	Towards non-linear modeling of molecular interactions arising from adsorbed biological species on the microcantilever surface. <i>International Journal of Non-Linear Mechanics</i> , 2007 , 42, 588-595	2.8	7
57	Non-linear vibrations and frequency response analysis of piezoelectrically driven microcantilevers. <i>International Journal of Non-Linear Mechanics</i> , 2007 , 42, 577-587	2.8	101

56	Dynamic modeling and performance evaluation of a vibrating beam microgyroscope under general support motion. <i>Journal of Sound and Vibration</i> , 2007 , 301, 146-164	3.9	43
55	An Analytical Modeling Framework for Piezoelectric-Based Microcantilever Actuator/Sensor With Thermal Effects Consideration 2007 , 169		
54	Adaptive Robust Control Strategy for Coupled Parallel-Kinematics Piezo-Flexural Micro and Nano-Positioning Stages 2007 , 997		
53	Axially compressed buckling of an embedded boron nitride nanotube subjected to thermo-electro-mechanical loadings 2007 ,		3
52	Nonlinear modeling of piezoelectric layered beams 2007 ,		1
51	Design and Development of H _∞ and E _s Synthesis Controllers for Nanorobotic Manipulation and Grasping Applications 2007 , 1393		2
50	Nonlinear Vibrations of a Piezoelectrically-Driven Microcantilever for Biologically-Induced Surface Stress Sensing 2007 , 1005		
49	Toward Ultrasmall Mass Detection Using Adaptive Self-Sensing Piezoelectrically Driven Microcantilevers. <i>IEEE/ASME Transactions on Mechatronics</i> , 2007 , 12, 680-688	5.5	27
48	Intelligence rules of hysteresis in the feedforward trajectory control of piezoelectrically-driven nanostagers. <i>Journal of Micromechanics and Microengineering</i> , 2007 , 17, 342-349	2	26
47	Robust Multiple Frequency Trajectory Tracking Control of Piezoelectrically Driven Micro/Nanopositioning Systems. <i>IEEE Transactions on Control Systems Technology</i> , 2007 , 15, 867-878	4.8	100
46	Vibration control of AFM tip for nano-manipulation using combined sliding mode techniques 2007 ,		5
45	Design and Development of a Fused Vision Force Controller for Nanofiber Grasping and Manipulation 2007 ,		3
44	A Closed-Form Distributed-Parameters Modeling Framework for Piezoresistive-Based Microcantilever Sensors With Application to Nanoscale Force Measurement 2007 ,		4
43	Modeling and Observer-Based Robust Tracking Control of a Nano/Micro-Manipulator for Nanofiber Grasping Applications 2006 , 969		7
42	An Experimental and Theoretical Investigation of Nonlinear Vibrations of Piezoelectrically-Driven Microcantilevers 2006 , 1631		3
41	Underlying memory-dominant nature of hysteresis in piezoelectric materials. <i>Journal of Applied Physics</i> , 2006 , 100, 014103	2.5	19
40	Closed form expression for self-sensing microcantilever-based mass sensing 2006 , 6173, 208		0
39	Reinforcement of Piezoelectric Polymers with Carbon Nanotubes: Pathway to Next-generation Sensors. <i>Journal of Intelligent Material Systems and Structures</i> , 2006 , 17, 199-208	2.3	78

38	Ring Microgyroscope Modeling and Performance Evaluation. <i>JVC/Journal of Vibration and Control</i> , 2006 , 12, 537-553	2	16
37	Coupled Flexural/Torsional Vibrations of a Piezoelectrically-Actuated Vibrating Beam Gyroscope 2006 , 1675		3
36	Modeling Molecular Interactions Arising From Adsorbed Biological Species on the Microcantilever Biosensor Surface 2006 , 1649		1
35	A switched stiffness approach for structural vibration control: theory and real-time implementation. <i>Journal of Sound and Vibration</i> , 2006 , 291, 258-274	3.9	47
34	Acquisition of high-precision images for non-contact atomic force microscopy. <i>Mechatronics</i> , 2006 , 16, 655-664	3	25
33	A Scheduled Control Framework for Electrospinning Process in Nanofiber-Based Textile Fabrication 2006 ,		1
32	Passive Nonlinear Vibrations of a Directly Excited Nanotube-Reinforced Composite Cantilevered Beam 2005 , 1913		3
31	A New Hysteresis Model for Piezoelectric Actuators With Application to Precision Trajectory Control 2005 , 1899		7
30	Acquisition of High Precision Images for Non-Contact Atomic Force Microscopy via Direct Identification of Sample Height 2005 , 1335		
29	Functional Nanotube-based Textiles: Pathway to Next Generation Fabrics with Enhanced Sensing Capabilities. <i>Textile Reseach Journal</i> , 2005 , 75, 670-680	1.7	51
28	A comparative study of the Galerkin approximation utilized in the Timoshenko beam theory. <i>Journal of Sound and Vibration</i> , 2005 , 280, 1132-1142	3.9	19
27	Passive vibration damping enhancement using carbon nanotube-epoxy reinforced composites. <i>Composites Science and Technology</i> , 2005 , 65, 2079-2093	8.6	181
26	Modeling and Vibration Analysis of Vibrating Beam Microgyroscopes Under Longitudinal Rotation of the Support 2005 , 345		3
25	Development of a novel strain sensor using nanotube-based materials with applications to structural vibration control 2004 , 5503, 478		5
24	Structural vibration control using an active resonator absorber: modeling and control implementation. <i>Smart Materials and Structures</i> , 2004 , 13, 998-1005	3.4	46
23	Novel Carbon Nanotube Reinforced Electro-Active Polymer Sensors for Structural Vibration Control 2004 , 533		2
22	Determination of Strength and Damping Characteristics of Carbon Nanotube-Epoxy Composites 2004 , 1461		5
21	A Fresh Insight Into the Microcantilever-Sample Interaction Problem in Non-Contact Atomic Force Microscopy. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2004 , 126, 327-335	1.6	49

20	An observer-based piezoelectric control of flexible Cartesian robot arms: theory and experiment. <i>Control Engineering Practice</i> , 2004 , 12, 1041-1053	3.9	60
19	A review of atomic force microscopy imaging systems: application to molecular metrology and biological sciences. <i>Mechatronics</i> , 2004 , 14, 907-945	3	35 ⁸
18	A Lyapunov-Based Piezoelectric Controller for Flexible Cartesian Robot Manipulators. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2004 , 126, 347-358	1.6	65
17	Lyapunov-Based Vibration Control of Translational Euler-Bernoulli Beams Using the Stabilizing Effect of Beam Damping Mechanisms. <i>JVC/Journal of Vibration and Control</i> , 2004 , 10, 933-961	2	28
16	A Review of Recent Developments in Atomic Force Microscopy Systems With Application to Manufacturing and Biological Processes 2003 , 569		2
15	Nanotube-Based Actuator and Sensor Paradigm: Conceptual Design and Challenges 2003 , 271		5
14	Distributed-Parameters Base Modeling and Vibration Analysis of Micro-Cantilevers Used in Atomic Force Microscopy 2003 , 1643		5
13	Piezoelectric Vibration Control of Translational Flexible Beams Using Switched Stiffness 2003 , 13		2
12	A piezoelectric driven ratchet actuator mechanism with application to automotive engine valves. <i>Mechatronics</i> , 2003 , 13, 933-956	3	31
11	A nonlinear double-winged adaptive neutralizer for optimum structural vibration suppression. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2003 , 8, 113-134	3.7	5
10	Nonlinear Control Techniques for the Atomic Force Microscope System 2002 , 373		9
9	Design and Dynamic Analysis of an Adjustable Inertia Absorber for Semiactive Structural Vibration Attenuation. <i>Journal of Engineering Mechanics - ASCE</i> , 2002 , 128, 1342-1348	2.4	7
8	A Reduced-Order Observer Based Piezoelectric Control of Flexible Cartesian (SCARA) Robot Manipulator 2002 , 395		2
7	A Comparative Study and Analysis of Semi-Active Vibration-Control Systems. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2002 , 124, 593-605	1.6	93
6	Optimum Active Vehicle Suspensions With Actuator Time Delay. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2001 , 123, 54-61	1.6	34
5	An Infinite Dimensional Distributed Base Controller for Regulation of Flexible Robot Arms. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2001 , 123, 712-719	1.6	20
4	Closure to Discussion of Optimum Design of Vibration Absorbers for Structurally Damped Timoshenko Beams, III (1998, ASME J. Vib. Acoust., 120, pp. 833-841). <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2001 , 123, 549-549	1.6	1
3	Identification and Retuning of Optimum Delayed Feedback Vibration Absorber. <i>Journal of Guidance, Control, and Dynamics</i> , 2000 , 23, 961-970	2.1	15

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| 2 | A Sensitivity Study on Optimum Delayed Feedback Vibration Absorber. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2000 , 122, 314-321 | 1.6 | 30 |
| 1 | Time-optimal/sliding mode control implementation for robust tracking of uncertain flexible structures. <i>Mechatronics</i> , 1998 , 8, 121-142 | 3 | 17 |